Flytec 6020 / Bräuniger IQ Competino+

Firmware Release Notes

V 4.02d (2018-03-29)

- Data field FL: align right
- Correct optimized route distance calculation when goal is cylinder
- Fix bug where route editor switches radius between meter and kilometer
- Fix layout problems in route editor

V 4.02c (2018-02-02)

- Renamed "Vario settings" menu point to "Device settings"

V 4.02b from 31/01/2018

- Fix typo in turnpoint radius field description (km instead of m)

V 4.02a from 23/01/2018

This update will delete all waypoints and routes from the vario. Make sure you save them to the SD card or your computer before updating.

- All varios start as "Flytec 6020"
- Cleaner start-up and shut-down screens
- Updated, unified texts for menus and settings throughout whole 6000 vario family
- The link the an FAF airspace file on the SD card is removed whenever airspaces are uploaded from the computer, or when airspaces are deleted through the menu
- All numeric values (e.g. cylinder radius) can be increased / decreased rapidly with the right / left arrow keys, and slower, for finer settings, with the up / down arrow keys
- Distances in routes are shown with one decimal
- Show optimized distance when entering or editing the optimized competition route
- Pressure sensor correction moved back to vario settings
- Range of vane wheel correction: 50 % to 150 %
- Waypoint and route selection now shows three items per page
- In the IGC file, the "takeoff" and "landing" C-records are now set according to the specification

V 4.01b from 09/08/2017

- FLARM version indication: Fixed error in communication with FLARM module
- Data fields: corrected some field names
- Data field "FL (ft)" renamed to "Alt FL", now to 3 digits, in hecto-feet according to standard

V 3.10r from 10/08/2015

- Race route: Keep type (ENTER/EXIT) when turning start cylinder into regular turnpoint
- **Bug fix**: Radius of some race route turnpoints may change when vario is turned off and later turned on again

- **Known error**: When importing a configuration file from another vario, in some cases the radius of some turnpoints in an existing race route may change

V 3.10p from 30/07/2015

- Race route: When defining start cylinder, type (ENTER / EXIT) from waypoint is used
- Removed correction settings for pressure sensor from settings (Requirement for competitions)

V 3.10n from 26/07/2015

- Added boot-up test for flight memory. If the test detects problems that would lead to a program crash: Automatic export of all flights to SD card, then automatic re-initialization of flight memory.
- Entry of waypoint radius in competition routes from 0.1 to 200.0 km in steps of 0.1 km
- Waypoints in competition routes are always initialized as "ENTER"

V 3.10g from 19/04/2014

- Bugfix LCD contrast. After an Init EEPROM the LCD contrast values have been set wrong and the LCD went dark.

V 3.10f from 28/02/2014

- Bugfix audio volume. The last setting is will be stored in the memory again, like in older versions

V 3.10e from 20/01/2014

- Support of various GPS modules
- Bugfix in near Thermal, Sinktone setting in fpm
- quick return from the Mode menu
- SW Version Character in IGC-File
- Acoustics suppressed during turning off. This solves the problem with the random acoustic after turning off.
- Log file on SD card
- Support Conical CESS
- This test version includes the ability to define the new conical end of speed section (CESS). In this version it is possible to set the second to last waypoint in the Competition Route as a CESS cone. The cone is defined with the default slope ratio of 1:2.5 and the radius of the truncated tip at the elevation plane of the waypoint (based on the waypoint altitude as entered in the waypoint list). As shown below:
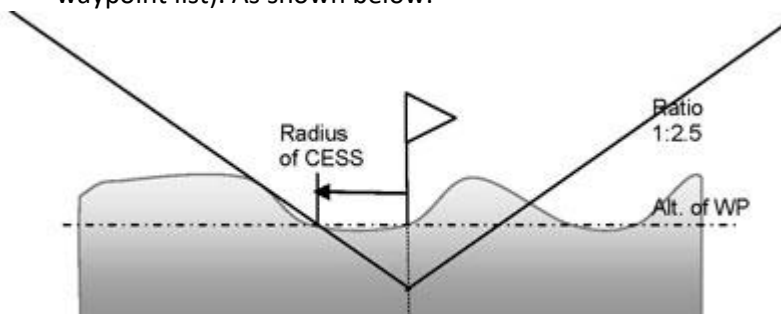
- It has come to our attention that the PWC failed to inform us that it is allowable to define a CESS where the tip of the cone is floating above the ground. For this reason, please follow the procedure below to enter such a CESS. Once the CESS concept is fully defined and codified, Flytec will of course, create an easier method to define a "floating CESS" in the instrument.
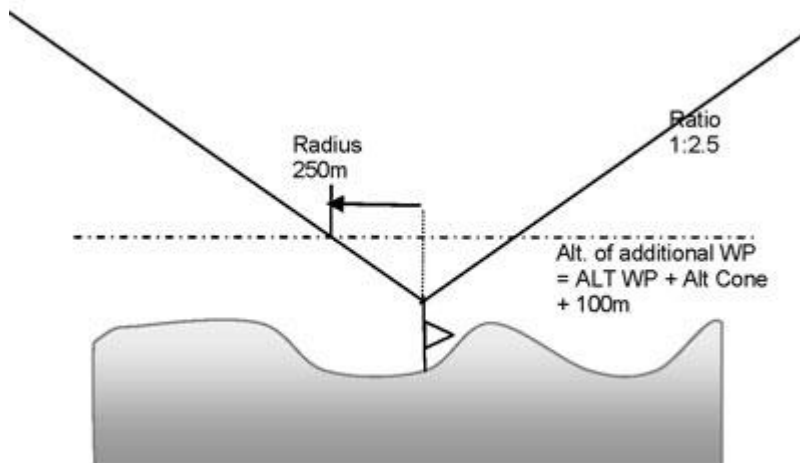
- At the moment, the best way to define a floating CESS in the 6030:
  1- duplicate the waypoint to be used for the CESS but with the altitude set to the altitude of the CESS tip plus 100m
  2- set the CESS radius in the Competition Route to 250m (which equals to the cone ratio of 1:2.5). If a different slope is used then the radius will need to be adjusted appropriately (i.e., 100* slope)
- As an example from the first practice task: The cone was defined with the tip at 50m AGL or 231m MSL and ratio 1:2.5. In this case you must make a new waypoint (with the same coordinates) with altitude set at (231m + 100m = 331m). Then set the radius to 250m and the ratio to 2.5 when setting the parameters for the CESS in the Competition Route.
- We are very sorry for this inconvenience. Flytec and Brauniger tried to clarify this new CESS concept with the PWC prior to the super finals but we never received a reply to our quires. Consequently we had to rely on pilots which have been at the test races, as to how the CESS is normally defined. Of course, Flytec and Brauniger want to make it as easy as possible for the pilot to define the CESS in the instrument and would be very thankful for input from the pilots. Please contact: info@flytec.ch or info@brauniger.com"

V 3.10d from 03/09/2013

- Plausibility check of the date. This should improve the problem with wrong dates in the IGC file
- Default values for the LCD contrast (Only for production)
- Userfield "Dist Start" improved. Coordinates of the start will be set with first GPS reception and with flight recognition, if satellite reception is Ok.

V 3.10b from 12/06/2013

- Bugfix in the log book. If a flight has been deleted individually, the details in the log book were confused
- Bugfix in the received airspace data via Flychart. The airspace data from the SD card were not affected.

V 3.10a from 7/05/2013

- **Attention**: This firmware update deletes all flights in the flight memory, because of a new memory organization
- Flight recording completely revised. This should fix the following problems:
  - "Memory Error" with wrong flights in memory (Like 18:12:00)
  - Wrong Date
  - Wrong flights when the battery voltage fails during the recording

- Bug fix in the waypoint recognition in a competition route, if the GPS has no valid 3D recognition
- Bug fix when writing the IGC file to the SD card. The line ends now with <CR> <LF> and is now read properly by all programs.

V 3.09h from 20/12/2012

- The FLARM Radio ID will be displayed in menu -> *Main Setup Menu -> Instr. Setup -> Flarm*
- The FLARM module shuts off now to safe current from the battery with the command-> *Main Setup Menu -> Instr. Setup -> Flarm -> No*
- Bugfix Countdowntimer > oder < 1h
- The countdowntimer is displayed now forever. Minus before start, + after starttime
- The countdowntimer on the second last line changes now between Countdowntimer/WP Name in the interval of 4sec./1sec.
- Bugfix with changing the configuration with Flychart or SD Card. Der display contrast will be adjusted to the set value just after changing.
- -> *Main Setup Menu -> SD-Card -> Save Settings* allows saving the configuration data to the SD Card. The file is saved to the directory CFG\0XXXX.cfg. The file name is the serial number of the instrument.
- With -> *Main Setup Menu -> SD-Card -> Restore Settings* allows to read back the settings if the serial number matches. An error message appears when
  - the file extension is wrong
  - the instrument type 6020 doesn't match.
- The command -> *Main Setup menu -> SD-Card -> Restore Settings* allows to restore configurations from other instruments (6020 or Competino+): If the serial number doesn't match the following data will not be overwritten:
  Pilotname, Glidertype, Glider Id, LCD-Contrast and GpsModule:
  SN, SW-Version, SW-Packages, Company (Flytec oder Br), Calibration data (absolute pressure, differential pressure and LCD-voltages and temperature correction)
- Bugfix in the battery monitor. The battery voltage is now checked in important places outside the main loop, eg in the flight analysis page after the flight.
- The units set in the instrument settings are now also the units in the CTR info page, e.g. feet or meters for the lower or upper margin
- Expansion of the CTR-list from 3 to 5 with a different prioritization. Airspaces or obstacles that lie close together should be recognized now faster than before.
- Bug fix for flights with an incorrect date. Now the current date of the RTC is used as the time of flight detection.
- After the end of the flight and the calculation of the signature, the completed flight is stored as IGC file on the SD card.
- Bugfix in reading the A / D converter.

V 3.09e from 8/08/2012

- New Tag W "Wave Window" in the CTR alarm selection
- BugFix Ctr Init
- Hysteresis near an airspace, 2 times the warning distance to avoid repeated warnings while circling near a CTR
- CTR info page page now split, selectable by right and left button, interpretation of the radio strings with adapted representation to avoid blank lines.

V 3.09d from 25/07/2012

- Change in 3D airspace warning: There is no acoustic warning even if you enter he area of an airspace if you are below the Lowerlevel minus the warning distance or above the UpperLevel plus the warning distance
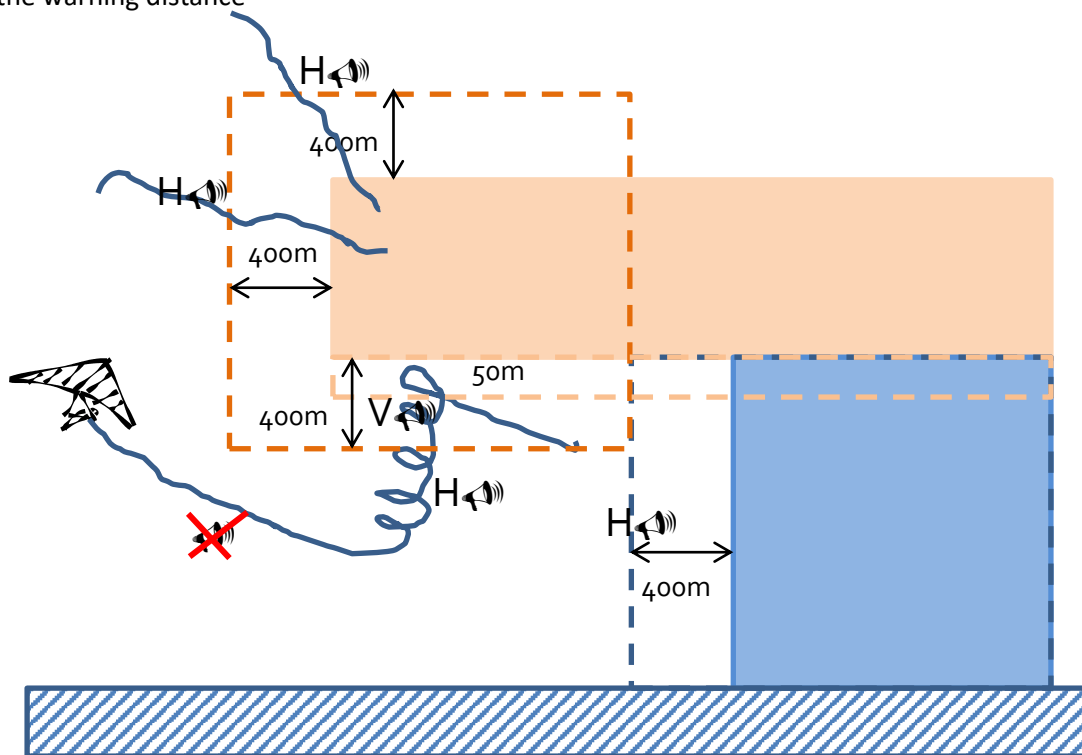
-
- Polygons must be closed now (Included in the *.faf file) by repeating the first corner point at the end. This allows to distinguish between polygons and line segments like cable cars, ropes or power lines.
- Bugfix with displaying segments
- Start time of a competition route is added again at the lower information line like in older versions.
- Status On/Off in airspaces is active now (Only in *.faf files)

V 3.09a from 20/06/2012

- For details, see "SD Card and airspace V3 35 English.doc"
- 3D airspace warnings. If the audible alarm is activated, a new audible alarm sounds and a new CTR Info Page comes up. This happens when you have reached the warning distance or has approached to 50 m below the value of the low level of faf File distance.
- After firmware Update the CTR warning is active "1" and all airspace types are activated with "Yes"
- On the Info Page CTR, a total of five CTRs can be disabled separately using the soft key F1. They disappear from the list, and are shown in dashed lines on the map for a clear identification. On the CTR Info Page, the sum of the disabled airspaces is displayed. With Softkey F2 react CTR all together can be reactivated again.
- Airspace type selection for *. faf files with extra tags. See manual
- New CTR - file selection
  In -> *Main Setup Menu -> SD card -> select CTR file* it is possible to select an *.faf airspace file stored on the SD card in the directory CTR \ FAF and to activate this airspaces. It is important to ensure that no long file names are used, the 8.3 DOS convention is mandatory.

- Display of additional information for the airspace data from Flyland Switzerland
Choose the desired air space in the CTR Info Page and select with Ok the additional information.
- After the *.faf file can be changed in the instrument we recommend to keep the original files in an additional backup directory. e.g. CTR \ SAVE \ where all the faf files could be backed up as eg. *.SAV files.
- Automatic GPS altitude adjustment A1. After switch on, the altitude A1 flashes and changes with the current GPS altitude, until A1 is set with F1 -> 1013 hPa, F2 -> GPS altitude or the arrow keys. The altitude is always set with flight recognition. Caution at the beginning the GPS altitude may differ up to 100m from the actual height. This variation depends mainly on the visibility and the position of the satellites.

V 3.08k from 8/11/2011

- Near hermal tone. The duration can be set now from 10% (Short Beep) to 100% (Steady tone) in -> Main setup menu -> Settings -> Accoustic vario -> Near therm. tone. Function and settings see separate description: "Optimized Competition Route"
- Bugfix saving the zoom mode and the right arrow function in the map mode into the EEPROM. With the right arrow key, only the active waypoints will be displayed. The settings remains until switch off.

V 3.08i from 1/10/2011

- Course-up display in the menu -> Setup Main Menu -> Settings -> Map orientation. The orientation of the map is acurate to one degree when the new calculation was invoked. The direction of the little arrow for displaying the track is approximated and in 45 ° increments. The course up display is calculated every 30 seconds, or if the track is running out of the picture, or after zoom or after a brief press of the right arrow button in map mode.
- Optimized competition route. See separate description: "Optimized Competition Route"
- Every normal waypoint can be defined as Enter or Exit. Default is Enter. This solves the problem with three concentric waypoints on the same position where first the inner circle has to be reached, then the outer circle has to be leaved and then the second inner circle.
- New Userfields "XTE" (Crosstrack Error) and "Dist opt Wp" (Distance to optimized waypoint in the optimzed route)
- Several small textchanges
- Competition route will be automatically deactivated after the last waypoint (Line or radius) is reached.
- Acoustic warning (high pitch - low pitch - low pitch) if FLARM userfield is incremented by one. The instrument cannot distinguish if the the new member was already recognized before. The sound sounds also when the same FLARM partner faded away is is recognized from new. In the info page there is a short warning text.
- FLARM warning can be switched on and off in the FLARM menu -> *Main Setup Menu -> Instrument Setup -> Flarm -> Acoustic Warning -> Yes*
- FLARM Hardware (HW) und Softwareversion (SW) is visible in the lower part of the menu -> *Main Setup Menu -> Instrument Setup -> Flarm*
- Track in the display and the moving map will be set to 0° when GPS-Speed less than 3km/h.

V 3.08f from 18/8/2010

- Initialization changed for new lot of Fastrax GPS.

V 3.08e from 14/6/2010

- Bugfix Instrument identifier in IGC file and Record over USB

V 3.08d from 7/6/2010

- SD-Card functionality (flights and Waypoint/routes)
- „--„ in Userfiled FLARM when FLARM is switched off
- Bugfix: Rare freezing during Bluetooth NMEA Output

V 3.08c from 8.4.2010

- BugFix Interruptpriorities FLARM. The display and the keyboard could freeze, but the vario and the recording were still active in the background.

V 3.08b from 10.03.2010

- FLARM fully functional
- New menu FLARM in instrument settings
- New Release Code Generator

V 3.08 from 11.11.2009

- CTR recognition including distance and acoustic warning.
- Info page lists the 3 nearest CTR's
- The second and third CTR in the list would be checked every 20 s and 40 s. All other CTR are checked one after each other, one per second.
- CTR acoustic Alarm active/not active. After the firmware update the CTR acoustic alarm is switched off by default. You can set it with -> *Main Setup Menu -> Pilot settings -> CTR acoustic Alarm*
- New handling of the compass rose.
  Empty compass rose with active bearing arrow showing towards up direction in case of no GPS reception. The bearing arrow should show, that a waypoint or route is active.
  Compass rose north up and active bearing also north up in case of GPS speed below 3 km/h.
- New Userfield L/D goal
- GPS-Module Type in Startup screen
- Automatic switch off if the instrument has no flight recognition after 30 min. or if the flight analysis screen stays for more than 30 minutes.
- Improvement in memory handling (freezing after start)
- Negative MaxA1 und MaxA2 on the flight analysis screen
- Altitude history ignored after start recognition. This should address the excess values of the vario in the flight analysis.
- Improvements in SMS handling: In the Info page it is possible to send an SMS on demand if an connection to a telephone provider is established. Attention. It is not ensured that an SMS is received by the intended receiver, because it can get lost in the network.

V 3.07e from 3.8.2009

- Automatic recognition of new GPS Module Fastrax
- Bugfix in SMS via Bluetooth

V 3.07c from 28.10.2008

- New sentences in communication protocol : waypoint attribute, Comp-Route radii, read out of flight analysis page values. See document "Interface definition 061008.pdf"
- Bugfix in route setting (Xxxx Route)
- Battery monitoring in Menumode

V 3.07a from 7.8.2008

- New Userfield: Alti GPS

V 3.07 from 14.7.2008

- Userfield: SartRace, inverted if race has started (positive)
- Zoom factor will be stored
- SPP Modus Bluetooth, NMEA, $GPRMC and $GPGGA
- PEV (Pliot Event Marker) in th eIGC file if a waypoint cylinder is recognized. Will ease the confirmation if a waypoint was reached.
- Correction CTR Radii up to 65km, plausibility check of the data received from the PC
- Averaging the battery indicator (10s)
- No recording if manual recording is active and if in menu mode
- "CONF"- command from the PC will be ignored, if recording is active
- New language Magyar
- New start display, Language is chosable. Last setting will be stored, so the startup procedure will remain the same (ESC and OK).

V 3.06a from 21.5.2008

- Start recording in Automatic mode ->No 2 minutes after switch on
- A1 adjustable during flight
- PEV-Handling changed (Pilot Event Marker). The marker is only visible in the IGC file as PEV. The marker does not set a waypoint with the actual position.
- Bug fix in flight analysis. A1 adjustment does not influence the maximum values.
- No flight analysis for flights shorter than 3 minutes.
- L/D req. always visible independent of speed
- Bugfix: J in Small Font corrected
- Bugfix GPS altitude below sea level
- Bugfix: Invalid B-records in the IGC file at the end of a flight.
- New userfield TimeStart". Remaining time to start if time shorter than 1 hour and competition route active. Inverse if negativ time, normal if positive time.

V 3.05c from 1.5.2008

- Improved Batterie Check
- Improved hardware initialising
- Reset of the 24 bit AD converter

V 3.05a from 15.2.2008

- Bugfix in Alt. A Goal
- Blocking of program execution in case that 6030 software has been loaded
- Bigger bearing arrows
- Pressure sensor user offset (Compensation of degradation over the years)

V 3.04 vom 10.12.2007

- Identifier set to 6020
- Bugfix with barometric altitude in IGC file

V 3.03 vom 10.12.2007

- First release version. Same level as 6030 V 3.21
- Filter setting in 5 steps. Detail settings are possible only in factory settings or with Flychart .
- Set waypoint of the actual position with long press WP and then Add Wayp. This is possible in every condition (During flying, in a Route in normal mode)
- Battery threshold für segment 8 reduced.
- Flight date derived from the first valid fix in the IGC file.
- GNSS Alti set to 0 in case of 2D fixes
- Baro Alti is based on 1013.25hPa
- SMS-Bluetooth function activated
- Alt1/Mrk doesn't save a Waypoint in the waypoint list anymore. Instead it sets an
- E record in the IGC file